

We Claim:

1. Data processing apparatus, comprising:

data storage means having a plurality of defined storage elements,

5 memory means containing usage data indicating which of said storage elements contains data, and

processing means configured to update said usage data in response to data being stored within said data storage means, wherein

10 said memory means further contains a datastore, and said processing means is configured to:

analyse said usage data to determine the number of said storage elements not containing data;

store information within said datastore indicating said number of storage elements not containing data; and

15 read information from said data storage means to determine whether said further data may be stored.

2. Data processing apparatus according to claim 1, wherein said data storage means comprises a RAID.

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3. Data processing apparatus according to claim 1, wherein said data storage means comprises a hard disk.

25 4. Data processing apparatus according to claim 1, wherein said usage data comprises a plurality of data elements, each data element corresponding to one storage element on said data storage means.

5. Data processing apparatus according to claim 4, wherein said usage data comprises a bitmap.

5 6. Data processing apparatus according to claim 5, wherein said analysis of said usage data comprises parsing said bitmap.

7. Data processing apparatus according to claim 1, wherein said datastore comprises at least one cache within the kernel memory of said memory means.

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8. Data processing apparatus according to claim 1, wherein said data comprises frames of image data.

9. Data processing apparatus according to claim 8, wherein each said 15 storage element has a storage capacity configured to provide efficient storage of an image frame of a predetermined definition.

10. Data processing apparatus according to claim 9, wherein each said storage element has the storage capacity to store only one of said image frames of said 20 predetermined definition.

11. Data processing apparatus according to claim 9, wherein said datastore 25 comprises a plurality of caches, and each cache is configured to receive information relating only to storage elements configured to receive image frames of a specified definition.

12. In a data processing system comprising processing means, memory means and data storage means having a plurality of defined storage elements, a method of storing data, comprising the steps of:

storing usage data within said memory means indicating which of said storage
5 elements contains data;

analysing said usage data to determine the number of said storage elements not containing data;

storing information within a datastore indicating said number of storage elements not containing data; and

10 reading information from said datastore to determine whether further data may be stored.

13. A method according to claim 12, wherein said data storage means comprises a RAID.

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14. A method according to claim 12, wherein said data storage means comprises a hard disk.

20 15. A method according to claim 12, wherein said usage data comprises a plurality of data elements, each data element corresponding to one storage element on said data storage means.

25 16. A method according to claim 15, wherein said usage data comprises a bitmap.

17. A method according to claim 16, wherein said step of analysing said

usage data comprises parsing said bitmap.

18. A method according to claim 12, wherein said datastore comprises at least one cache within the kernel memory of said memory means.

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19. A method according to claim 12, wherein said data comprises frames of image data.

10 20. A method according to claim 19, wherein each said storage element has a storage capacity configured to provide efficient storage of an image frame of a predetermined definition.

15 21. A method according to claim 20, wherein each said storage element has the storage capacity to store only one of said image frames of said predetermined definition.

22. A method according to claim 20, wherein said datastore comprises a plurality of caches, and each cache is configured to receive information relating only to storage elements configured to receive image frames of a specified definition.

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23. A computer-readable medium having computer-readable instructions executable by a computer such that, when executing said instructions, a computer will perform the steps of:

25 storing data within data storage means having a plurality of defined storage elements;

storing usage data indicating which of said storage elements is currently being

used;

in response to data being stored within said data storage means, updating said usage data;

analysing said usage data to determine the number of said storage elements not 5 containing data;

storing information within a datastore indicating said number of storage elements not containing data; and

reading said information from said datastore to determine whether further data may be stored.

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24. A computer-readable medium having computer-readable instructions executable by a computer according to claim 23, wherein said data storage means comprises a RAID.

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25. A computer-readable medium having computer-readable instructions executable by a computer according to claim 23, wherein said data storage means comprises a hard disk.

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26. A computer-readable medium having computer-readable instructions executable by a computer according to claim 23, wherein said usage data comprises a plurality of data elements, each data element corresponding to one storage element on said data storage means.

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27. A computer-readable medium having computer-readable instructions executable by a computer according to claim 26, wherein said usage data comprises a bitmap.

28. A computer-readable medium having computer-readable instructions executable by a computer according to claim 27, wherein said step of analysing said usage data comprises parsing said bitmap.

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29. A computer-readable medium having computer-readable instructions executable by a computer according to claim 23, wherein said datastore comprises at least one cache within the kernel memory of the computer.

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30. A computer-readable medium having computer-readable instructions executable by a computer according to claim 23, wherein said data comprises frames of image data.

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31. A computer-readable medium having computer-readable instructions executable by a computer according to claim 30, wherein each said storage element has a storage capacity configured to provide efficient storage of an image frame of a predetermined definition.

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32. A computer-readable medium having computer-readable instructions executable by a computer according to claim 31, wherein each said storage element has the storage capacity to store only one of said image frames of said predetermined definition.

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33. A computer-readable medium having computer-readable instructions executable by a computer according to claim 31, wherein said datastore comprises a plurality of caches, and each cache is configured to receive information relating only to

storage elements configured to receive image frames of a specified definition.

34. A computer system programmed to execute stored instructions such that in response to said stored instructions said system is configured to:

5 store data within data storage means having a plurality of defined storage elements;

store usage data indicating which of said storage elements contains data;

in response to data being stored within said data storage means, update said usage data;

10 analyse said usage data to determine the number of said storage elements not containing data;;

store information within a datastore indicating said number of storage elements not containing data;

read said information from said datastore to determine whether said further data

15 may be stored.

35. A computer system according to claim 34, wherein said data storage means comprises a RAID.

20 36. A computer system according to claim 34, wherein said data storage means comprises a hard disk.

37. A computer system according to claim 34, wherein said usage data comprises a plurality of data elements, each data element corresponding to one storage 25 element on said data storage means.

38. A computer system according to claim 37, wherein said usage data comprises a bitmap.

39. A computer system according to claim 38, wherein said step of analysing
5 said usage data comprises parsing said bitmap.

40. A computer system according to claim 34, wherein said datastore
comprises at least one cache within the kernel memory of said computer system.

10 41. A computer system according to claim 34, wherein said data comprises
frames of image data.

15 42. A computer system according to claim 41, wherein each said storage
element has a storage capacity configured to provide efficient storage of an image frame
of a predetermined definition.

43. A computer system according to claim 42, wherein each said storage
element has the storage capacity to store only one of said image frames of said
predetermined definition.

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44. A computer system according to claim 42, wherein said datastore
comprises a plurality of caches, and each cache is configured to receive information
relating only to storage elements configured to receive image frames of a specified
definition.

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